

FIRST CLASS MAIL



A Publication of
THE PHIL-MONT MOBILE RADIO CLUB, INC.
P.O. Box 88, ABINGTON, PA 19001

The Blurb



The Blurb

February 1994

PhilMont
PHIL

OUR
RESIDENT
GROUNDHOG



VOLUME 44

is published monthly by, and for, the members of **The PHIL-MONT MOBILE RADIO CLUB, INC.** whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. Copying and quoting is permitted with a credit line. We gladly exchange publications with other amateur radio clubs; requests should be sent to the Editor. *Blurb* subscriptions are available to nonmembers for \$10.00 addressed to the Treasurer. The club meets at 7:30 p.m. on the first non-holiday WEDNESDAY of every month at **The Franklin Institute Science Museum**, Benjamin Franklin Parkway at 20th Street, Philadelphia. Enter from Winter Street, or parking garage on 21st street.

ALL VISITORS ARE WELCOME!

Amateur Radio License Examinations - the first non-holiday Thursday of every month at The Franklin Institute Science Museum—doors close at 6:30 p.m. - **SHARPI**

CLUB INFORMATION

24-Hour Information Number at W3TKQ: **(215) 448-1139**

Repeater frequencies: 147.03 MHz (Roxboro input requires no PL)

PL required for off-site receiver (OSR) access:

Bucks County 131.8 Hz—Center City 103.5 Hz—Lansdale 114.8 Hz

444.80 MHz (186.2 Hz PL)

Simplex frequency: 147.51 MHz

Packet BBS frequency at W3TKQ: 144.99 MHz

Mailing Address: P.O. Box 88, Abington, PA 19001

STATIONS

W3QV - 147.03 MHz. Repeater - 8200 Ridge Avenue, Philadelphia, PA - Trustee W3BBB

W3TKQ - The Franklin Institute Science Museum, Philadelphia, PA - Trustee W3PWG

AMATEURS (with license) ARE ALWAYS WELCOME TO OPERATE W3TKQ.

OFFICERS

PRESIDENT: KB3IV, Ed Masarsky, 15 Poe Avenue, Wyncote, PA 19095 (215) 572-5238

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2nd VICE PRESIDENT: W3STW, Al Tribble, 2848 Carter Road, Trevose, PA 19053 (215) 639-6771

SECRETARY: KE3CZ, Bob Wilcox, P.O. Box 21914, Philadelphia, PA 19124 (215) 535-7355

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W3BBB (94); N3FVI (94); AA3EP (95); W3IRS (95); W3IIM (A); K3KUD (A); W3RM (A)

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 Welcome: NEEDED

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Publisher/Typist: W3IIM

DEADLINE: To be assured of publication in the current month, all copy MUST be in the hands of the Editor at the Bored of Directors' Meeting!

NET SCHEDULE

SUNDAY 09:30 147.030 MHz FM "SUNDAY MORNING 2 METER NET"
 10:00 28.993 MHz SSB "10-ON-10 NET"
 10:20 3.993 MHz SSB 75 METER NET
 TUESDAY 20:00 147.030 MHz FM CW PRACTICE NET
 LAST WED 20:00 147.030 MHz FM W3TKQ OPERATORS' NET

**APPLE BYTES**

Don Gordon, WB3KOJ

FEBRUARY BIRTHDAYS

- 01 Charlotte Feierman (XYL K3EUI*)
- 03 Barry Feierman - K3EUI*
- Everett Powell - N3GPT
- 04 Eunice Bohlander (XYL W3VVS)
- 05 Mike Concordia - WB3KAC
- Scott Myers - N3POK*
- 07 Lou Andrews (XYL W3IRS)
- 08 Matt Landel - KD6VYT*
- 10 Sharon Masarsky - N3GLU
- 11 Jerry Russell - K3JR
- 14 Kay Russell (XYL K3JR)
- 16 Ted Braverman - N3NRU
- Marjorie Mendelson (XYL N3OWJ*)
- 17 Sam Smith - K3GBA
- 18 Bill Mannino - WA3NSP
- Mim Roeshman (XYL W3LKI)
- 20 Michael Fisher - N3NJJ*
- 23 Louise Newell (XYL K3JJO)
- 24 Bill Biermann - NZ3Z
- Barbara Ann Hagerty (XYL AA3BB)
- 26 "Whatsup" Lee - N3NDV
- 27 Ann Lerro (XYL N3MUC)
- 28 Roger Cox - K3TYB

*Indicates New Member 1993-94

HELP PHIL-MONT

Are you planning to join ARRL or renew your current membership?

Help P.M.R.C. by joining or renewing through the club...

Contact our new Treasurer Dave Witkowski - N3KGG for details.

DUES & DIRECTORY UPDATE

With your December *Blurb* you received your Dues Invoice & Directory Information Sheet.

Please verify the information and return it with your dues.

TO: DAVE WITKOWSKI, N3KGG, 730 GREYMONT STREET, PHILADELPHIA PA 19116
 FOR THOSE WHO HAVE NOT PAID... **THIS IS YOUR LAST BLURB!**

CONTEST * PRIZES *** CONTEST**

The APPLE is dead. I have moved into the 90s, so, a new name is needed for this feature.

Send your suggestion and/or logo idea to W3IIM.

Winners will be announced when he gets ready to announce them.

FIRST PRIZE - LUNCH WITH W3BBB (Olive loaf on white bread)

SECOND PRIZE - A 2 hour "Best of '03 Tape"

THIRD PRIZE - A 4 hour "Best of '03 Tape"

very few people know the difference. In my QSOs I simply refer to my antenna as a dipole—it keeps the conversations simple.

Since we're not concerned with resonant lengths, what should the dimensions be? Very simple: Make your antenna as long and as high as you can. The lowest frequency of your antenna will be the one where the total antenna length is at least a quarter-wave long. All higher bands will work fine. For example, if you have room for only 70 feet, you have a very good 80 through 10 meter antenna. Longer would be better for 80M tuning, but mine is only 64 feet, and I use it on 80 meters as well as all the higher HF bands. For the transmission line, I favor 450 ohm open-wire line, but heavy-duty 300 ohm TV line could be used. However, in rainy weather the TV line characteristics change, so go for the 450 ohm open wire line.

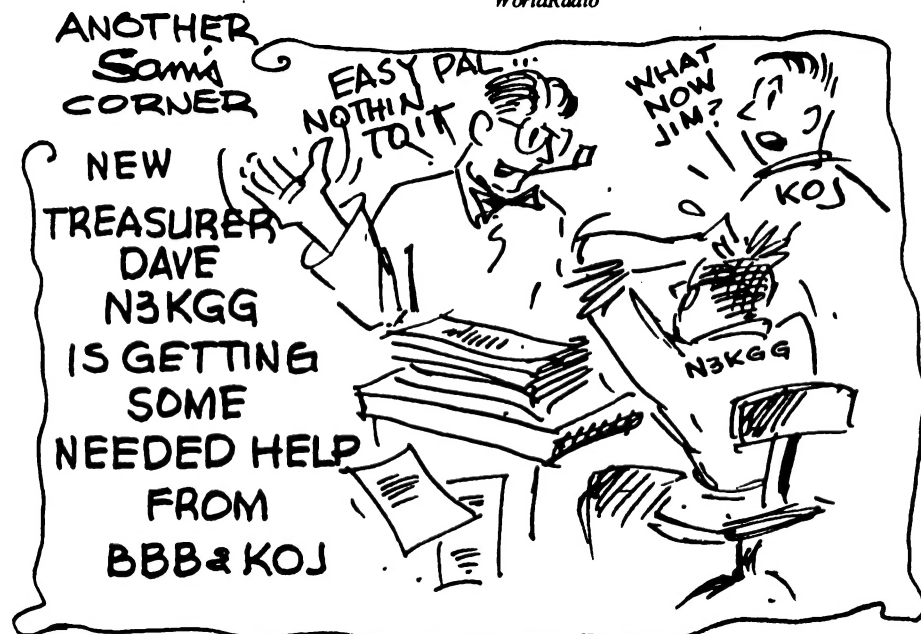
Of course, with open-wire line, your antenna tuner must have a balun in order to

match the line. If your tuner doesn't already have it built in, you can buy or make a suitable 4:1 balun. If you intend to buy a new tuner for this type of antenna, I suggest the MFJ Model 962C Versa Tuner III. It costs about \$120 more than the 941E, but it includes a much superior balun, and if you ever go to 1.5 KW, you would already own a suitable tuner.

Even if you use beam antennas, a tuner could enable tuning the entire band. Whatever your HF antenna type, an antenna tuner will increase its bandwidth.

In the opening paragraphs, I made references to authors who should not write about antennas. On the other hand, there is excellent reading material available. For example: a) *The ARRL Antenna Book*, 16th Edition, ARRL, 1991. b) *Reflections* by M. Walter Maxwell, 1990, ARRL. c) *Aerials II* by Kurt N. Sterba, 1993, WORLD RADIO BOOKS. d) Anything by Lew McCoy, W1CP, is always worth reading. ☺

WorldRadio



The PREZ SEZ

Ed Masarsky, KB3IV



I am sitting here thinking about many things I could write in this month's column. One thing caught my eye as I reviewed some past columns. In the August 1993 *Blur*, I started with the statement "Boy is it Hot!" Considering what we've all been through these past couple of weeks, I'll take the heat.

Were you prepared when the ice storms hit? What didn't you have? Batteries, blankets, salt, a generator, milk, bread, and most importantly a fully charged HT? Phil-Mont was ready. Operators were on duty at all times to help-out in any way they were

needed. The repeater was in its 'weather mode' to afford mobiles priority in case of emergency traffic. The time-out was set for 70 seconds to allow for quick response to any calls. The system worked as designed, but most of all the members and users made it work.

Thanks to all Phil-Monters and control operators for the professional way they handled themselves. We were luckier than our friends out in California, and I'm sure many stories will be told of how the amateur community pitched in to help. Keep up the good work, and remember, "Be Prepared!" ☺



UPCOMING

Feb 2 General Meeting Program:
**The Future of High Definition
Television in the Philadelphia Area**
Robert Ross, N2OML, of KYW TV

Feb 3 License Examinations at
The Franklin Institute
Feb 16 Directors' meeting at
N3KGG's

Mar 2 General Meeting Program:
A W3TKQ Tour
plus videos of its construction
and dedication.

Mar 3 License Examinations at
The Franklin Institute
Mar 16 Directors' meeting at
N3FTC & WU3I's

Apr 6 General Meeting Program:
A Double Feature!

Phil-Mont Does Dayton
(the original 1984 masterpiece)
~ and ~

the premier showing of the its sequel,
**Phil-Mont Does Dayton II—
The Next Generation**

Apr 7 License Examinations at
The Franklin Institute
Apr 13 Directors' meeting at
N3GMH's

May 4 General Meeting Program:
**ARRL Night with
Kay Craigie, WT3P**
ARRL Atlantic Division Vice Director

May 5 License Examinations at
The Franklin Institute
May 18 Directors' meeting

HAMFESTS

Mar 5 ABSECON, NJ
Shore Points ARC

Mar 13 YORK, PA
York Springfest

Mar 26-27 TIMONIUM, MD
Baltimore ARC

V.E. TEST LOCATIONS

Confirm all information, in advance, with the contact person. Licensed applicants must bring a their original license and one photocopy of it. All applicants, including children, must present positive ID. Also bring the original, and a copy, of any Certificate of Successful Completion needed to prove current status. **The ARRL VEC's 1994 test fee is \$5.75; there is no charge for a Novice test.**

Monthly, 1st Thursday
The FRANKLIN INSTITUTE
Dusty Rhoads, ND3Q
(215) 482-0386
(215) 879-0505

Monthly, 3rd Thursday
BELLMAWR, NJ
Bill Helmatag
(609) 546-7710

Irregularly
BRYN MAWR
Bob Lees
(215) 265-6032

Monthly, 1st Saturday
LEVITTOWN
George LeNoir, WR3B
(215) 943-4886

Quarterly
LINWOOD, PA
The 96 Over The Hill Gang
Russ Stafford, AA3CH
(215) 859-9210

Monthly, 3rd Thursday
MORRISVILLE
Dave Munson, NM3K
(215) 788-7515

Monthly, 1st Monday
POTTSTOWN
Warren Erdman K3ZXQ
(215) 679-5764

Monthly, 3rd Monday
TELFORD
Warren Erdman K3ZXQ
(215) 679-5764

Monthly, Last Saturday
UNIVERSITY OF PA
Garrett Klein, WZ3G
(215) 898-8538 shack
(215) 222-8752 home

Odd Months, Last Wednesday
WARMINSTER
Tom Michaud, WA3TQJ
(215) 343-3494

More on antenna tuners

Howard Liebman, W2QUV
ARRL Technical Coordinator

There has been much nonsense published in articles and books on the subject of antennas. Even antenna manufacturers publish outright lies about their products. This is the reason that the ARRL doesn't accept antenna advertisements in *QST* which include any gain claims. If the ARRL had to take this step, is it any wonder that the average ham gets confused? It would take a large book to correct much of this misinformation, so this article will only deal with a small part of it, namely antenna tuners.

Whether it's called "Antenna Tuner," "Transmatch," or "ATU" (Antenna Tuning Unit), it means the same thing. We will refer to it as "antenna tuner," or simply "tuner," for the balance of this article. Briefly, what an antenna tuner does is cancel all reactances in the antenna and transmission line (resonance), and match the resistance of the system, enabling virtual 100% transfer of power. Simply stated, even with a mismatched system, you can deliver virtually all the RF power of your transceiver to your antenna.

In published literature on the subject, some authors (who don't understand the subject at all) have written that the antenna tuner only "fools" the transceiver into thinking that it is seeing a 1:1 SWR, and thus only enables the transceiver to deliver full power. Yes, it does enable the transceiver to deliver full power, but it also tunes out all mismatches in the system, including transmission line to antenna mismatch, and also any nonresonance in the antenna itself.

In the real world, a well-meaning ham puts up a simple dipole, then goes through the agonizing procedure of pruning it to resonance at a certain frequency in the band

of interest. If successful, he winds up with an antenna that works fine in only a portion of the band (phone, CW, or whatever). If he now gets a simple, inexpensive, antenna tuner, he can tune the entire band. He then realizes that he wasted much time and effort in the antenna pruning. If you have one simple antenna fed with coaxial cable, and a transceiver in the 100-watt class, get an MFJ model 945D Mobile HF Antenna Tuner. The "Mobile" in the title just indicates that there are no antenna selection switches, which are unnecessary when you only use one antenna.

Now that you know that your antenna can be tuned all across a band with an antenna tuner, try it on other bands. A lot more versatility has been given to your antenna system. With the tuner, you can tune your rain-gutter, metal balcony fence, a random wire, the mast supporting another antenna, an indoor antenna, or whatever.

If you've read this article thus far, you have probably come to the conclusion that an antenna need not be physically resonant at any particular frequency. Bravo! You now know more about antennas than the average ham. This knowledge enables you to realize that with the antenna tuner, you can easily put up a simple multiband antenna without traps, coils or stubs.

Now that you don't have to concern yourself with resonant antenna lengths, you're ready to put up simple and cheap multiband antenna. It is a dipole look-alike fed with open-wire line. I say dipole look-alike because the legs are not cut for quarter or half-wave, and therefore not a true dipole. Perhaps "doublet" would be a better name, but call it a dipole anyway, since

driven into deep reversal, is like a stallion that had become a mare in the midst of a thunderstorm.

Long, learned articles have been written in the wonderland of ham radio magazines that tell of the miracle, where all you gotta do is charge up a big, fat capacitor with a dozen volts or so, and whap a miniature bolt of lightning onto the correct polarity of the cell, and it will rise from the dead just like Frankenstein's monster. Uh huh. Yup, that does work, but the monster is a whip. You will find that stallion never goes back into the stable for long, and you will take it out and dump it 'ere the cows come home. Anyone who thinks otherwise, is probably a Clinton man, and believes the national health plan is gonna work too.

You want to live dangerously, try drilling a very tiny hole in the nicad and squirt in some distilled water, then seal the hole with hard wax. This little sucker will take a

charge, and develop such energy you would not believe... before it blows up.

So, how do you know how much remaining charge is left in a nicad? What is the worst thing you can do to your battery pack? Should you charge it every day if it needs it or not? Should you work it until it drops dead? What is the best way to charge a nicad battery pack? Does it really have a memory, or not? Will NAFTA get through the congress? Does Hillery write her own stuff?

I don't know, but if you listen to your local repeater, the answers to these questions, and more, will surely come your way. Meanwhile, if some kindly old ham offers to zap your cell with his big, fat capacitor, call a cop! Cell molestation must be stamped out or you will find yourself in the hands of a counselor pointing at various parts of your battery pack. ☹

The Tompkins County ARC's Hilltopper



MINUTES

JANUARY GENERAL MEETING

Bob Wilcox, KE3CZ, Secretary



KB3IV opened the 529th General Meeting by slamming his gavel at 7:46 p.m. Damages litigation to follow. Ed said good-bye to the outgoing officers and welcomed the new.

N3KGG, Dave, reported on the treasury. W3IIN had passed him the duties with clear instructions (but not the vacation information), and if you thought Dave was nervous as the Welcome Chairperson, you should have seen this one! The starting balance for the year is \$0.00, but that number is quite different with membership renewals. All PMRC renewals and/or ARRL memberships and renewals should be sent to N3KGG.

AA3BB reported that Gina Policarpo-N3QKZ, and Bill Blanco-KA3ZHB were accepted as members at the December Board Meeting. Welcome to the new Members. Two applicants, Herbert Scott-N3OLK, and Tracal Topp-N3PDP will be voted-on at the next Board Meeting.

KB3IV reported on net controls. Ed thanked all that assisted in '93, and asked that if anyone is interested in getting involved with the voice or CW Practice Nets, please contact him.

KB3IV for 'BBB on the repeater: it's working?!?!? An anonymous *Blurb* editor made a motion that 'BBB no longer boast the success rate until such time that 'BBB finds a cure for Murphy's Law. Ed did request that the club members on the repeater be a little more tolerant of others on the machine. Quote he: "Teach them, don't chastise them." (Sounds like he's been reading my previous articles; that makes two of us!)

AA3EP reported that he is looking for some help with the "Super Cities Walk" on April 10th, and the "Spring Classic Bike Tour" in Montgomery County on May 14th.

Call Charlie if you can help out.

WU3I reported on the VE Program. Anyone interested in joining the VE Team should give Dusty, ND3Q, a call. Steve also secured the bulk of the records from all past VE Test Sessions, reporting some impressive numbers.

Manny, Moe and Jack (WU3I, KB3IV and N3FVI) reported all is well at W3TKQ. N3FVI would ask that since Santa didn't even leave coal, maybe some of the folks in the club might help acquire the equipment on the wish list in December's 'TKQ Report.

W3IIM on the *Blurb*: "It's Working" (better than the repeater at times... knock on wood.)

N3NNM, home from college, reported for 'Welcoming'. There were 31 members and 9 guests. The guests were Maureen McCloskey, Jerry Burstein, Bobby Palko, Paul Foster-N3RBY, Chris Hoch, David Madden, Bob Plamondin-KE4HCX, Jim Larkin-KA2FFP, Tracal Topp-N3PDP.

KB2ERL handled the 50-50. The winning ticket was drawn by Bobby Palko III, and the winner was Bob Palko, Jr., his Dad. (hmmm)

NEW BUSINESS

The new logo (displayed on the front cover of the January *Blurb*) was discussed, as were the Paddlerama Flotation Devices which AA3BB displayed. 'Want to know what we are talking about?—see you at next General Meeting.

Paul, N3PSO, presented the evening's program: "Interfacing Your World Digitally." The W3BBB projection device had to be removed because the Institute has a strict no-smoking policy. The show did go on, however.

The Meeting was adjourned at 9:45 p.m. ☹

THE W 3 T K Q REPORT

ICE! the one word that strikes fear in every ham's heart. We sure have had our share of it so far this year. Should I fire up the rig on my 75 meter dipole? That DX station on 20 meters sounds inviting, but do I still have a tribander over my roof, or is it lying in a heap on top of the roof?

I am happy to report that W3TKQ came through the ice storm in fine shape. Our new Mosely monster stood up to everything Mother Nature could throw at it. The only casualty was a rope securing one leg of a wire antenna. Steve, WU3I, bravely faced the elements on the Sunday after the big blow. He fastened a new rope to the end of the wire, and had us back on the air in record time. All systems, all antennas are a go.

We are experiencing some scheduling problems of our volunteer staff. We need some input from all our regular operators, as to whether they can maintain their current operating times. There is one critical time slot to fill. We need volunteer operators for every Thursday, both a.m. and p.m. If you can help, please contact Bill, Steve or me.

We are moving ahead with many of the plans mentioned in previous W3TKQ reports, and hope to have some new equipment in place very soon. Many thanks to those who responded to our request for funds. Why don't you visit the station and see what we've been doing lately. Thanks again to all the supporters of W3TKQ.

—Ed Masarsky, KB3IV ☺

NAY-CAD

Russ Hamilton, W2FXU

Every five/eight years, the subject of nicad batteries rears up on the repeater like a horse with diarrhea. The stuff runs from one repeater to another with some of us adding to the piles and others just kicking it around. It is well to remember the immortal words of Harry S. Truman who said, "Never kick a turd on a hot day," and all of us should be careful of how we kick nicad technology around.

Now we can all agree on one thing: the nicad is a weird bird. You have heard how it is supposed to have a "memory." This means it will recall everything nasty you ever said about it, and will hold it against you, and just when you need it most, it will lie down, and go to sleep right in the middle of an emergency transmission.

You are talking to the war department, and she is telling you to stop at the store and get a wheeeeze-whizzle-whiiiiizzzz. You go back to her and ask, "Huh?" She comes back and says, "Get a ... zzzzz." Now you know your nay-cad is crapping out on you.

This is most unkind of it, especially since you have been feeding it lots of charging, topping it off, socking the old DC to it day after day, and now you are going to face the war department with that thing in your hand ungratefully dead. What you have there is a classic nay-cad.

Some will tell you all this was your fault. They will say you overfed the nay-cad, and it got fat and lazy. Some will say you gave it DC-betes, stuffing it with all that rich charging juice. Some smart-ass old guy will come wheezing out of the coax and tell you he has nicads that are twenty years

old, and can still go all night like any twenty year old should. Be WARNED, never leave old guys like this alone with your young battery packs!

Some will say nicads are like a muscle, the more you use them, the better they get and the longer they last. Some will say you have to work your nicads until they are almost exhausted, then give 'em some rest, feed 'em and work hell out of 'em all over again, just like a newlywed.

Here we should pause long enough for some specifics. A single cell, such as a 1.25 volt double A, is NOT a battery? Whazzat? Those things you have been calling batteries all this time, are NOT batteries, they are CELLS. When you connect two or more cells in series, THEN YOU HAVE A BATTERY. You have heard of dry cells of course, like when you stick them in your flashlight, but you tend to forget those nicads all wired together are batteries made of a series of individual cells. They say when you stick a bunch of nicad cells together, they get like a team of horses all pulling together on the load and things go just fine until one of the horses wants to go to sleep and the rest of the team just runs over it and tromps it to death if you do not unhitch the load. This is called going into reversal.

A tired nicad is a nay-cad. A dead nicad is a no-cad. Only a strong, well-fed-but-not-too-fat nicad with its veins all bulging out, is a nicad and these are hard working, cheerful and willing. Nay-cads, if not driven into reverse polarity, will readily charge back into healthy nicads. A no-cad, a cell

Life goes on... for us nuts

Carl Vold, W3SGR

In this retirement home (namely White Horse Village) the price is so much a month, for which we get all the utilities except the phone, and we get one meal per day, plus other things.

We get this meal in the coffee shop, or in the dining room. But if we go to the dining room, we must wear a coat and tie. So this day I put on my coat and tie, got on my electric car, and headed for the dining room.

Now, since I am a loaner, the question is what do I do. My idea is to go sit at a four place table and see what happens. So far it takes about five minutes for three women to occupy the three empty chairs—it's not their idea, the head waiter brings them over.

Now, how does a loaner start a conversation with three nice ladies? I say "my name is Carl" and wait for an answer. That day I got Amy, Georgia and No-Answer, so I mentally named her Silent Mary.

The conversation was started by Amy. "Remember the man who worked here... in the work room? He was put in jail the other day for robbing a laundromat near his home. They had movies of the whole break-in. The woman with him did some washing."

My thought was "why would anyone rob a laundromat?" so I said "that must have been her fault." The answer from Amy: "be careful, you have three against one!" I laughed and said "can't you imagine those two walking down the street—he sees a bank and says 'let's knock-off that bank.'" Her answer is "no, let's get the laundromat next door. I have some things to wash—give me a quarter."

Amy and Georgia laughed. Not Silent Mary. She looked at me madly and said "you're a nut."

So be it. ☺

REPEATER TRUSTEE FINED; AWAITS OUTCOME OF APPEAL

The FCC has issued a Notice of Apparent Liability to William A. Krause, WA2HDE, the trustee of a 220 MHz repeater in New York City. The repeater was found to be transmitting for several days in August on 243 MHz, a Federal Aviation Administration frequency used for emergency locator transmitters.

The FCC's NAL called the violation "willful and repeated." Krause, an engineer, said that the repeater, a 10-year-old commercial unit, developed a malfunction that caused it to emit a very weak signal on 243 MHz when its transmitter was unkeyed. He said the repeater was checked out on a regular basis.

The FCC said that the violation was "minimally occurring" on three days, August 30, 31, and September 1, and that the FAA had said the "unauthorized signal" also had occurred on August 26-29.

The NAL was issued September 30; Krause responded on October 21, saying "I at no time willfully transmitted on any frequency that I am not authorized for. I was shocked to hear that there was any problem at all, much less one of such a nature."

Krause told the FCC "I have always made measurements of the transmitter in the transmitting mode, and would never have found this problem unless pointed out" (the spurious signals were present only when the repeater was in receive mode—ed). Krause pointed out that this was his first offense, and asked the FCC not to impose the fine. ☺

The ARRL Letter



Talk UP
Amateur Radio!



The Southern Reporter

Howard "Gil" Gilpin, W3SRU

In the past, the *Blurb* has had its share of interesting correspondents, including "The Old Grouch," "Farmer Makefield," and "The Northern Reporter." In this issue, we begin a new relationship with "The Southern Reporter."

A few years ago, Gil fulfilled a long-time dream of retiring to Sanibel Island, in Southwest Florida. Though not actually living on the island, he did the next best thing—he bought a home on the mainland, about one mile from the causeway!

In 1981, Gil was Phil-Mont's Vice President, and in 1982, and again in 1985, Gil served as President.

Very interested in the public service aspect of ham radio, he was always anxious to help out with, and often coordinate, PMRC's special events. Since moving to Fort Myers, he has quickly become fully involved in emergency services in, and around the area.

Many Phil-Monters show up down here in sunny Florida. It's nice to live in a place where people come, from all over, for their vacations!

I had a nice three-day visit with Jack and Jinny last time they came down to Useppa Island. Unfortunately, I had trouble at sea with my motor vessel, however 'HARING SEA TOW' came out and assisted me. The charges were reasonable.

Bob—N2RM, and brother Dick—N8DM, come down to Northport quite often to visit their mom, Dee Moore, WA2NSA. I've had many nice visits with them. We go up to visit Hal—W3AA, and Marian—WA3YJR, each time that Bob and Dick are down. We go out on the beach and watch Hal pinch the girls in the bikinis! Last time

Bob and Dick were down, we went down to Naples to visit Ned—N2EM, and Gladys, who are doing well, and looking good. Dick stayed down an extra week, after Bob went home, and went to the Fort Myers Amateur Radio Club Hamfest with me. About the time that he was boarding his plane for home, I found out that he had won first prize, an FT-840! I called him in Detroit that night to tell him, and shipped the rig to him.

W3AA has a new 2-meter beam, and is now able to get into 'my' repeater on Sanibel Island, over 100 air miles away! The repeater is a Motorola MICOR, formerly used by the police on 155 MHz until they moved up to 800 MHz. The city of Sanibel put up a new 120-foot tower, and built us a ham shack in the police station for RACES/



W3AA WA3YJR W3SRU N2RM WA2NSA N8DM

ARES use. (They're very hurricane conscious down here, you know!) ☺

105TH MONTHLY VE SESSION STATISTICS JANUARY

17 candidates pass 13 elements
5 new amateurs plus 6 upgrades

VE team members:

Dusty Rhoads, ND3Q, Chairman

Russ Stafford, AA3CH; Bob Wilcox, KE3CZ;

Barb Levine, AA3DV; Niel Leone, W3FZR; Dick Moll, W3RM

**AMATEUR LICENSE EXAMS HELD ON THE FIRST
NON-HOLIDAY THURSDAY OF EVERY MONTH**

Registration begins at 6:00 PM

Doors close at 6:30 PM sharp

**THE FRANKLIN INSTITUTE
SCIENCE MUSEUM**

For Information Call ND3Q at

(215) 482-0386 or 879-0505

Accessible by the handicapped.



I just completed the installation of an MFJ repeater controller, and am now preparing to add a 440 repeater to the system. I've become the W3BBB/N3DHI equivalent for the repeaters by default. No one else technically capable is available! Also have 28 crystals to be installed in surplus police HTs that I'm converting to 2-meters, then will convert a bunch of surplus police mobiles.

HELP! I'm very active in RACES/ARES, and have been appointed Lee Coun-

ty ARES Response (Jump) Team Director. Florida is developing an extensive "Jump Team" program, in the aftermath of Hurricane Andrew, and we may be sent anywhere from Tallahassee to Key West to help out.

I enjoy talking to the Phil-Mont gang on 14.175, and on the 10-meter net when the band is open. I miss Doctor Carl on there—get him back on the air!

Regards to all, from sunny Southwest Florida! ☺

"DON'T TAILGATE... WAIT"—for the courtesy ☺!

PHIL-MONT's DOING FIELD DAY IN 1994!

"CQ Field Day, CQ Field Day!" With the last weekend in June just months away, it's time to get serious. For all the newcomers to Phil-Mont and to Amateur Radio, Field Day will be the time of your life... as far as Ham radio is concerned.

Amateurs across the United States and Canada gather all the goodies they can carry, say good-bye to their wives, husbands and families, and scurry off into a field! Soldering irons heat-up as portable generators and storage batteries are persuaded to give as much "juice" as they'll bear. All that "extra" wire that's collecting dust in cellars miraculously becomes 75 and 40 meter dipoles, strewn between unsuspecting trees. Yagis get assembled and placed on makeshift towers. The best collection of HF radios, packet stations and

UHF/VHF multi-modes are assembled for all operators to use, regardless of their present license class.

Field Day is ham radio's day to shine. Actually, it's a test of endurance and preparedness to operate under adverse conditions, simulating an emergency. That's why generators, batteries, home-brew dipoles and other antennas are used. How quickly could YOU wire-up a 75 meter dipole?

Field Day is also a learning experience. For those of you that are Novices and Technicians, you'll be able to learn about HF and other modes you might not ordinarily have access to. It can be a chance to learn from the "Vets" you hear every day. Everyone can operate, regardless of class. In fact, we need as many Phil-Monters as we can get. Remember, Field Day is also *a competition!* We get to do our best against other clubs in area.

Time is on our side, but we need to start planning for June. Ideally, we'll get enough interested operators that we can schedule convenient shifts, so everyone will have a chance to setup, operate, barbecue (maybe cook if your hands are clean), do some logging, and hopefully be around to strike the equipment.

If you have gear, any gear including coax or antennas, a laptop computer or portable power source, I want to hear from you! Check your schedules and pencil in the last weekend in June...

"CQ, CQ Field Day, de N3IEI." ☺

for the Center City input of the repeater. He assisted at the installation of both these projects.

He is an ARRL Volunteer Consulting Engineer, a Member of the QCWA and the Roosters, although, due to antenna restrictions, his activity has been curtailed.

One of the things Bob would like most is to, "share the history of Phil-Mont with the incoming members, so that they might appreciate the Club that much more."

Bob's many years of service to Phil-Mont are indicative of his unselfish style and his tenacious zeal for life. Many things can be used to gauge the success and quality of a subject. K3KUD is a statement of the unequivocal success of Phil-Mont, and of Amateur Radio. ☺

CLUB INFORMATION

24 Hour Information Number at W3TKQ
(215) 448-1139

Phil-Mont Pro-Phile

*Learning about our Club and Hobby, through the people with whom we share them.
by Bob Wilcox, KE3CZ*

Robert "Bob" Schmilewske, K3KUD

Bob was born on January 28, 1921, and was raised in the West Oak Lane section of the City. His wife of forty years, Margaret, who passed away in 1986, was the first ever recipient in 1962 of the Lady Phil-Monter Award. Bob has not remarried.

Bob's son, Richard, has been employed, since 1975, with McNeil Pharmaceuticals as a Quality Control Calibration Specialist. His daughter-in-law, Donna, is a nurse. He is extremely proud of his two grandchildren, Kim, 13, and Bob, who is 9. He describes Kim as his "favorite girl" and Bob as a "pro athlete in training."

Bob was educated in the Philadelphia Public School system, and attended night classes at Drexel Institute. Following World War II he attended the US Armed Forces Institute, and studied as a structural engineer. In 1955 he completed his Masters Course in Naval Architecture, specifically structural, at MIT.

From 1943 to 1946 Bob served in the U.S. Army with the 4th Infantry Division in Europe. He was a Communications Chief, with the rank of Staff Sergeant. A Purple Heart and a Bronze Star with Oak Leaf Cluster were presented him during his military tour.

Being employed at the Philadelphia Naval Shipyard from 1938 to 1975, except for time in the military, he specialized in structural conditions resulting from war, and/or corrosion damage of naval vessels.

From 1955 until he retired in 1975 he worked exclusively on submarines. Bob also provided assistance to a host of other countries regarding the methods of ultrasonic inspection, and repairs to restore submarines to designed parameters.

He is a Registered Professional Engineer as well as a Naval Engineer recognized by Chile and Brazil.

First interested in Amateur Radio in 1941, with Ed Hannon-W3BPQ as his teacher, and Brad Martin-W3QV (yes, that's the same call that is on the repeater) whom he credits with changing him from an SWL (short wave listener) to a prospective Amateur Operator, he eventually was licensed in 1960.

Delays in getting his ticket were caused by the war and post war activities, as well as being dedicated to his marriage. (I think his job may also have kept him busy.) Within the year, however, Bob upgraded to General, and he joined Phil-Mont in 1961.

In the past he has been the Editor of the Blur [112 issues-ed], and has chaired or served on the Nominations and Awards Committees many times. In addition to this he has been a Director for numerous terms.

His most recent contributions to Phil-Mont have been in the design of the anti-torque cable arrangement for the tower which supports the huge Mosley beam at W3TKQ, and he was also instrumental in making the contacts, and securing the site,

"Fingerprinting" phones may beat cellular fraud

A technology designed to thwart cellular phone fraud by making stolen access numbers useless is being tested by PacTel Cellular in Los Angeles.

Network operators have been plagued by illegal network access, as thieves intercept a caller's frequency and read the access code and phone number. They then install duplicate numbers in tampered phones, a process known as cloning, and steal cellular services.

The technology is called PhonePrint, and was developed by a subsidiary of TRW. It determines the legitimacy of a call by comparing the unique signal frequency patterns of the phone making the call with the pattern on record for that phone number.

When the frequency does not match the one on file, the call is terminated before the system is accessed. The frequency print—as individual as a human finger print—cannot be duplicated.

The Los Angeles test concludes early this year and after that the technology will be made widely available. ☺

Communications News

Virus Alert

Be on the alert for the Satan Bug— "one of the best-written [reportedly by a 15-year-old San Diego native, whose identity is known to authorities] and potentially most dangerous viruses in quite some time," according to experts in the anti-virus community interviewed by *LAN Times*. "More skillfully crafted than Michaelangelo," the polymorphic, heavily encrypted virus acts like a chameleon, mutating and changing its appearance on each system or file server it infects.

Besides adding 3,500 to 5,000 bytes to each file it infects, resulting in slowed response time, the virus also changes the file date of infected files so the four-digit year is 100 years later than the original file date. The really scary part is that the virus is designed to circumvent the security features in NetWare's NETX program, thereby allowing it to spread across networks, and incorporates code that is specifically designed to make it immune from the leading commercially-available anti-virus software developed by McAfee Associates and Central Point, among others.

For more information about the Satan Bug call Norman Data Defense Systems at 703-573-8802. ☺

Service Industry Newsletter

Call

1-800-32-NEW-HAM
for free information
for prospective hams

NEWSLETTERS EXCHANGED

Anne Arundel Radio Club (Maryland)
Baltimore Radio Amateur Television Society (BRATS)
Chaverim of Delaware Valley
Cherryville Repeater Association (NJ)
Delaware-Lehigh Amateur Radio Club (DLARC)
Delmont Radio Club
Fort Myers Amateur Radio Club (Florida)
Marple-Newtown Amateur Radio Club
Mid-Atlantic Amateur Radio Club (MARC)
Mobile Sixers Radio Club
Penn Wireless Association
R F Hill Amateur Radio Club
Reading Radio Club
Sanibel Amateur Radio Emergency Unit (Florida)
Sussex Amateur Radio Ass'n (SARA) (Delaware)
The 96 Over The Hill Gang (New Castle, Delaware)
Tompkins County Amateur Radio Club (New York)
Warminster Amateur Radio Club
Worldradio Magazine
Exchanges with additional parties are welcomed.

THE PHYSIOLOGY OF LIGHTNING

Gene Pressler, W3ZXV

This is the first of four articles, originally published in Delmont Radio Club's newsletter, and reprinted here with permission of the author. Editor's note: I know it's still winter, but by the time this series is completed, we will, no doubt, have had our first electrical storm, and will have been properly prepared!

Thunderstorms are one of nature's most spectacular displays, yet they are not very well understood by most of us. Soon it will be the time of year when we are most likely to experience their effects.

Of particular interest to us as amateurs, operating radio equipment from the reasonably effective lightning attractors we call antennas, what is lightning and how does lightning strike?

Lightning stokes are transient high current electrical discharges of the static charges which accumulate into layers in ordinary cumulonimbus thunderstorm clouds.

Well over half of all lightning discharges occur within thunderclouds, however, lightning between ground and cloud or between cloud and ground is of the most interest to us because of the damage it can cause to life and property.

Lightning discharges are called "flashes," typically lasting on the order of 0.5 sec., and these are made up of various discharge components. Flashes generally contain 3-4 high current pulses, called "strokes," each of about 1 ms. in duration, and separated in time by 40 to 80 ms. Lightning flashes may seem to flicker slightly because the human eye is just barely able to discern the individual pulses of the strokes making up each flash.

Lightning discharges typically begin with an electrical breakdown in the cloud, which sets the stage for negative electrons in the cloud to be channeled toward ground. These discharges are propagated by a "stroke

leader" in a series of short, faintly luminous steps. This discharge element may also be called a "stepped leader" because it moves in steps which are tens of meters in length, and of about 1 μ s in duration. There are pause times between steps of about 50 μ s, and currents on the order of 100 kA may flow.

As the leader tip nears ground, the electrical field beneath it becomes very large, causing one or more upward-moving discharges to be initiated from the ground. When the downward-moving stepped leader connects with the upward-bound discharge from the ground, the leader channel has been ionized and a highly illuminated "return stroke" is propagated up the path created by the leader.

The upward velocity of the return stroke may be one-third the speed of light, and carry between 10,000 and 200,000 amperes of current! The air in the leader channel may have been heated to nearly 60,000 degrees F which causes the channel, which is several centimeters in diameter and perhaps 1-5 km long, to expand rapidly. This explosive expansion causes the shock wave that we perceive as thunder.

The return stroke lowers the charge in the stepped leader channel. Once return stroke current ceases to flow the flash may end or, if there is additional charge available at the top of the ionized channel, a continuous "dart leader" may propagate down the residual first-stroke channel to initiate a second or a succession of return strokes. These successive strokes are components of what we see as a lightning flash. Each complete stroke may lower hundreds of kA of charge to ground.

The attachment process leading to the connection of the upward, and downward-

HAMSHOW CONVENTIONS
PUT ON "HOLD"

The Amateur Radio Industry was shocked to learn in early November that the much touted HamShows, scheduled for January 1994 in San Diego and Santa Clara, CA, have been cancelled due to the poor health of HamShows President Mike Forsyth, N7KQE, of Shawnee, Kansas.

While HamShows insiders are adamant about respecting Mike's privacy, we have been assured that his condition is not life threatening. A letter to industry members is scheduled to be in the mail by Nov. 19. A copy of that letter is reprinted here.

"We regret to inform you that due to personal health reasons, the planned California HamShows in January 1994 have been cancelled.

"HamShows had planned to produce five major conventions in 1994, beginning with the two California conventions in San Diego and Santa Clara. Unfortunately, I am physically unable to dedicate the effort necessary to professionally produce those shows, and they must be cancelled.

"We regret any inconvenience this may have caused. HamShows will continue to plan future conventions, and will be contacting you for input on how we can improve our services. Thank you for all your past support and interest. Once my health has improved, we hope to work with you in creating a series of professional conventions.

"Sincerely, /s/ Mike Forsyth, President."

We have been informed that along with the letter, checks refunding advance booth payments are also scheduled to go out, and that all other outstanding financial obligations will be met. Forsyth appears to be

THE PHIL-MONT MOBILE
RADIO CLUB, INC.
1994 BUDGETINCOME

ARRL RENEWALS	\$ 425.00
<i>Blurb</i> SUBSCRIPTIONS	30.00
DONATIONS	100.00
DOOR PRIZES: 50-50	450.00
DUES	3,150.00
MISC. INCOME	25.00
INITIATION/BADGES	250.00
PROJECT SALES	10.00
SOCIAL EVENTS	50.00
	<u>\$4,490.00</u>

EXPENSES

ARCHIVES	\$ 30.00
ARRL RENEWALS	325.00
AWARDS	140.00
BADGES	225.00
<i>Blurb</i>	2,700.00
DOOR PRIZES: 50-50	225.00
MEMORIAL/SUNSHINE FUND	40.00
MISC. EXPENSES	25.00
PROJECT EXPENSES	10.00
REFRESHMENTS	300.00
REPEATER MAINT., REPAIR	125.00
AUTO PATCH	120.00
SOCIAL EVENTS	50.00
SPECIAL EVENTS	25.00
STATIONERY, POSTAGE,	
SUPPLIES, BANK	50.00
W3TKQ STATION MAINT.	100.00
	<u>\$4,490.00</u>

trying to maintain a good level of professionalism even in the face of personal problems. ☺
W5YI Report

4th annual **BUS TRIP** to the HAMVENTION in DAYTON, OHIO April 29, 30, May 1, 1994

.....The granddaddy of all Hamfests,a must for all Ham s
3 days of Hamming, Forums & talks about Ham Radio, Door
Prizes adding up to thousands of \$\$\$\$. Ham gear, OLD & NEW.....over 550
exhibit booths occupied by more than 250 companies.....more than 1000 out door
flea market tables.... and at night, the QCWA or DX dinner on Fri. The Banquet on
Sat. and the Hospitality rooms & NJDXA on both nights.

*** Complete price **** Everything included***

1. Round trip fare (cruiser bus with bathroom & VCR)
2. Motel. (3 nights and 4 days at the Comfort inn, thurs.-Sun.)
3. Tickets for the Hamvention for all three days.
4. Tickets for the Banquet Sat. night (filet mignon dinner + entertainment, music, guest speaker and door prizes.)

**PRICE... Individual \$275 (or less, see *) double occupancy.
H&W \$450 per couple. Family \$550 H&W + children 1,2 ?**

(single occupant per room add \$90)

DEPOSIT \$ 50

BALANCE due on or before March 25, 1994..... 225 *

for reservations or details contact; **KC2Q Mike DiPersio**
(908) 774-1095) fax (908) 774-7093 P.O. Box 357

make check payable to M.DiPersio...

Bradley Beach, NJ 07720

* # of individuals attending	complete cost per individual	bus only
20	\$ 275.00	\$ 150
25	245.00	120
30	225.00	100
35	211.00	86
40	199.00	74

NOTICE

Due to the continuing icy road conditions, the January Directors' meeting was cancelled. KB3IV, however, polled Board members to obtain a positive vote into membership for N3OLK and N3PDP

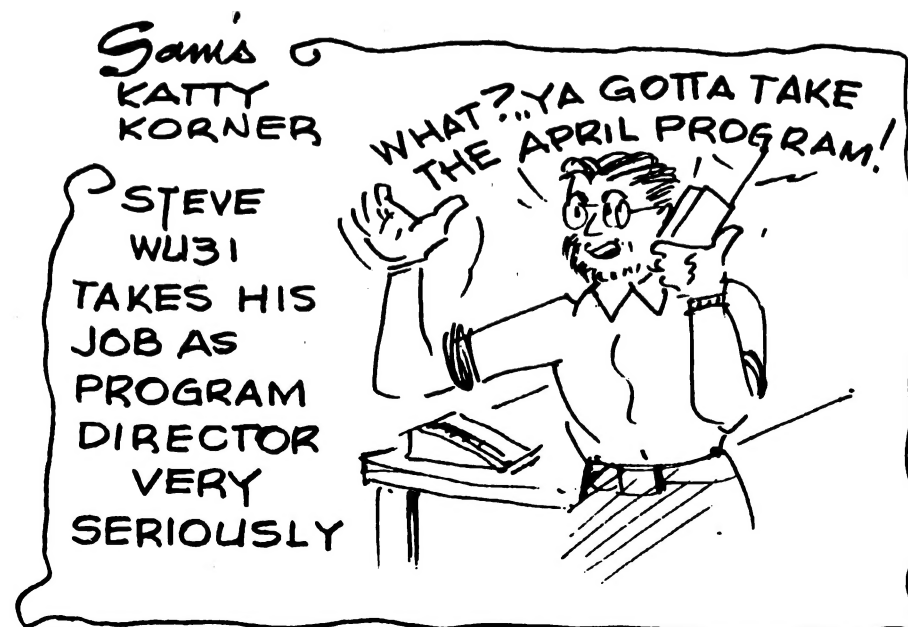
moving discharge components is of importance to us. Often, as stepped leaders approach a conductive object such as a tree, a house or other relatively tall structure, leaders are propagated up from the structure, a few meters toward the downward-moving discharge. It is at that point in time that the "point of strike" is determined. Return strokes may be followed by lower-level "continuing currents" to ground which may continue to flow for some time. With durations of up to 500 ms., combustible materials at the strike point may reach ignition temperatures.

While lightning can produce some truly awesome sights and sounds, the destructive effects it can have on people and things are of considerable interest. In 1989, for example, lightning caused over \$70 million worth of property damage in the United States alone. ☹

Part two next month.

NEW MEMBER APPLICATION

CALL: **N3R BX**
NAME: **Phillip Swartz**
HANDLE: **Phil**
CLASS: **Technician**
ADDRESS: **606 Lancaster Avenue**
Bryn Mawr, PA
19010
HOME PHONE: **(215) 525-5020**
BUSINESS PHONE: **(215) 228-8441**
OCCUPATION: **Printer**
INTERESTS:



1994

FEBRUARY

1994

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 CODE PRACTICE NET at 8 PM K3JJO	2 GENERAL MEETING at The Franklin Institute Refreshments at 7:00 PM Meeting starts after 7:30 <i>Ground Hog Day</i>	3 LICENSE EXAMS at The Franklin Institute Registration begins at 6:00 Doors close at 6:30 PM <i>sharp!</i>	4	5
6 2M NCS N3FTY 10M NCS W3HFX 75M NCS W3PWG <i>Ronald Reagan 1911</i>	7	8 CODE PRACTICE NET at 8 PM W3RM	9	10 ● <i>New Moon</i>	11 <i>Thomas Edison 1847</i>	12 <i>Abraham Lincoln 1809</i>
13 2M NCS W3GQD 10M NCS W3HFX 75M NCS AA3CH	14 <i>St. Valentine's Day</i>	15 CODE PRACTICE NET at 8 PM W3STW	16 DIRECTORS' MEETING at N3KGG's <i>Ash Wednesday</i>	17	18	19
20 2M NCS NS3Y 10M NCS W3HFX 75M NCS AA2FU	21 <i>Presidents' Day</i>	22 CODE PRACTICE NET at 8 PM N3ALW <i>George Washington 1732</i>	23  OPERATORS' NET at 8 PM	24	25	26 ○ <i>Full Moon</i>
27 2M NCS N3KGG 10M NCS W3HFX 75M NCS KB3IV	28			<i>When you don't know what you're doing, don't do it all at once.</i>		